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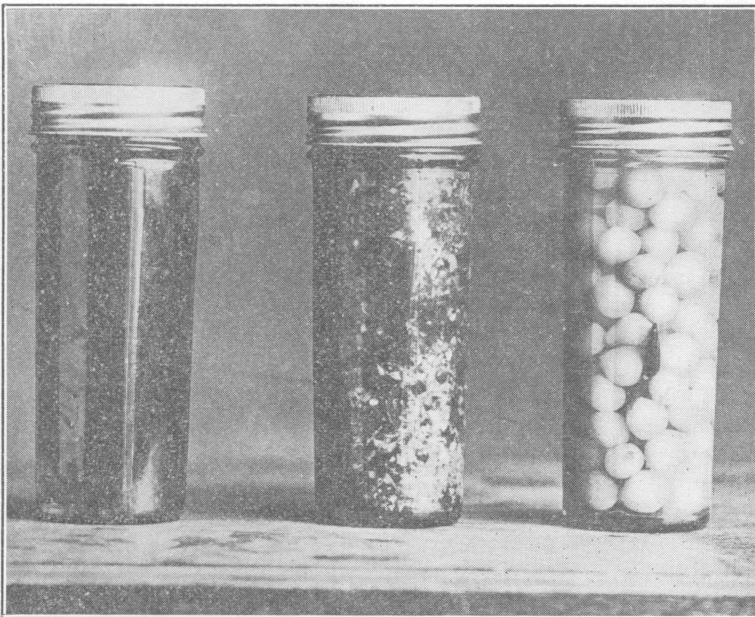
(In co-operation with the United States Department of Agriculture.)

JULY, 1916.

EXTENSION SERVICE

No. B-26

Canning, Preserving, Pickling



GRAPEFRUIT MARMALADE. DIXIE RELISH. PICKLED ONIONS.

Address

CLARENCE OUSLEY

Director and State Agent, College Station, Texas

This bulletin is prepared primarily to meet the demand of the Home Demonstration workers and canning club members for recipes for special products in advanced work. It is prepared, also, to meet the needs of those who are not members of either of these organizations and who reside in counties having no county home demonstration agent under whose personal supervision they may work.

Those desiring a woman county agent should write to the Director and State Agent, College Station, Texas, for information.

No part of this bulletin is original with the writer. It is a compilation of a few practical recipes that have been thoroughly tested. The recipes on strawberry preserves, orange pectin, orange marmalade, and mint jelly were furnished by the Bureau of Chemistry, U. S. Department of Agriculture, being the very recent work of Dr. Martin Straughn of the Bureau of Chemistry, and Miss Ola Powell, of the Office of Demonstration Work, U. S. Department of Agriculture. Much of the material used is a compilation from Government Bulletin No. A-81, which is for the exclusive use of club members.

BERNICE CARTER,

State Home Demonstration Agent.

Preparation for Canning in Tin.

Making Flux.—Put some commercial hydrochloric (muriatic) acid into a glass or crockery vessel (not metal), add strips of sheet zinc until no more can be dissolved. To this add an equal quantity of water. Label this "Flux" and use carefully. When canning, have one vessel (a can will do) with enough flux in it to clean the tools. Keep separately in a glass bottle the quantity to be used in sealing cans.

Cleaning and Tinning the Steel and Copper.—It is of first importance to have the capping steel and tipping copper in good condition. These may need to be rubbed with coarse sandpaper or on a soft brick to smooth them, or the steel may have to be filed to take the rust off. In the latter case care must be taken to keep the edge of the steel true. Both the capping steel and the tipping copper must be kept tinned or coated with solder to make the solder flow evenly when sealing. Have ready in a can a handful of sal ammoniac mixed with a few pieces of solder. Heat the already smoothed capping steel or tipping copper until almost red hot, dip into the flux, then into the sal ammoniac and solder, turning it about and rubbing until bright and well coated with solder. Then dip into the flux again.

Preparation of Vegetables.—In securing a fine quality, much depends upon having the vegetables or fruit absolutely fresh, crisp, and clean, and kept cool. All surroundings and utensils should be spotlessly clean, and all operations from beginning to end of any lot of canning should be carried on as rapidly as possible. A good slogan is "one hour from the field to the can." First have cans and lids thoroughly washed and scalded. Sort and grade the fruit, discarding all that are defective, and use together those of same size. Use only uniformly well ripened products. Only young, tender, quickly grown vegetables retain their flavor when canned.

STEPS TAKEN IN CANNING IN TIN.

1. Sorting and grading fruit or vegetables, washing, peeling, etc.
2. Scalding, peeling and coring (for tomatoes). Put into trays and lower into boiling water for one minute. Remove at once to prevent cooking. Plunge into cold water to make the fruit firm, and peel promptly. In tomato peeling use a slender pointed knife to cut out the core and be careful not to cut into the seed cells. Keep the tomatoes whole when possible.
3. Blanching consists of plunging the vegetable or fruit into boiling water for a short time. Use a wire basket or cheese cloth square for this. The blanch gives a more thorough cleaning, removes the strong odor and flavor from certain kinds of vegetables, improves the texture, and insures a clearer liquor. It also shrinks the fruit or vegetable and makes it more flexible. A full pack is then more easily made. The time required for blanching varies with the state of ma-

turity. Beans should be blanched until tender enough to bend without breaking. Peaches will pack better if quickly blanched by lowering for 15 seconds into water below boiling (about 180 degrees F.). The same blanch will make the hard varieties of pears pack better and give them a more transparent appearance; and used for cherries will prevent splitting and cracking. Spraying fruit with cold water after blanching will make it firmer. Frequently it is well to put the vegetable into cold water for an instant after blanching to make more crisp.

4. Packing (see table for size of cans to use for different vegetables).—The Federal laws require the cans to be filled as full of food as is practicable for processing and to contain only enough liquor to fill the spaces and cover the contents. Weigh a sufficient number of cans before and after filling to obtain an accurate idea of average net weight. On account of expansion in processing, corn can be packed less full than other vegetables. These instructions do not cover the canning of corn for market. Mark the cans with a pencil or knife to show contents. Plan in advance and work rapidly. Let one person do the packing and another attend to the weighing. Do not allow filled cans to stand before adding liquor and exhausting. To do so will injure the product.

5. Adding brine, sirup, or water.—After filling to within $\frac{1}{4}$ inch of top, shake the can gently to displace all air within it. Clean and wipe the groove around the opening. Slip on the cap and weigh before sealing, to be sure of having the required weight.

6. Fluxing and capping.—Apply the flux carefully around the groove, making sure that none of it enters the can. Use a small brush or cord, or little mop made by tying a piece of clean white cloth around the end of a small stick. The flux is used to make the solder adhere to the tin. Apply the clean, hot capping steel, holding the cap in place with the center rod; while you lower the steel, turn it steadily until the solder flows. Hold the rod firmly and lift the steel with a sudden twist to swing the melted solder around the groove evenly.

7. Exhausting.—Place the cans in trays and lower into boiling water to within 1 inch of the top to drive the air out of the cans. Let them stay the shortest possible time necessary to drive out the air. Ordinarily three minutes is enough, and the temperature need not again reach boiling before cans are taken out. Frequently, exhausting is done at 180 degrees F. Exhausting is necessary. If omitted, the air left in the can expands, causing it to bulge. The can may not resume normal shape again, or if it does and is exposed to a warmer temperature it may again expand, giving the appearance of a "swell." This will not only prevent sale of that can, but may also cut off future orders. Furthermore, the presence of air may

cause the tin to dissolve more readily and enter into the food. Exhausting is required of canning club members.

8. Tipping.—Close the small hole in top of the can immediately after exhausting. Apply flux as for capping, and use a little wire solder to close the hole. Hold the solder with left hand near the hole and barely touch the hot copper to it, so that only a bead will drop and cover the hole. This makes a neat tip.

9.—Processing.—Boil the cans which have been exhausted and tipped to sterilize the contents. Have the water boiling vigorously when the cans go in. Lower cans slowly under the water and look out for any showers of bubbles from a can. These show that it leaks at the point from which the bubbles come and must be taken out and resoldered. Begin counting time when the water first boils after immersing the cans. Keep it boiling constantly. In intermittent processing, the vegetable is processed for one hour on each of three successive days. The time is sometimes reduced to two days with beans. It is not possible to state the shortest time which may be used safely, because of the varying conditions.

10.—Cooling.—Cool all canned products as quickly as possible to stop the cooking, which breaks down the fruit and injures the flavor and color. Plunge the cans into very cold water immediately, especially when processing intermittently. Never stack cans close together until entirely cold.

11. Labeling.—After 8 to 10 days, or immediately before selling, label all cans. Place the sealed end down, so that the opposite end will appear at the top when placed on the shelf. Use a rather dry paste, and put it only on the end of the label, so that no paste will touch the tin. If paste touches the can, it may cause rust.

STANDARD PACKS FOR VEGETABLES CANNED IN TIN.

Vegetable.	No. 3.	No. 2.	No. 1.
Tomatoes	2 lb. 1 oz.	1 lb. 4 oz.	
String Beans	2 lbs.	1 lb. 5 oz.	
Peas		1 lb. 8 oz.	
Baby Beets		1 lb. 4 oz.	
Okra	2 lbs.		
Peppers		1 lb.	8 oz.
Soup Mixture		1 lb. 4½ oz.	

STANDARD PACKS FOR FRUITS CANNED IN TIN,

Fruit.	No. 3. Can.	No. 2. Can.
Figs		1 lb. 6 oz.
Peaches	2 lbs.	
Pears	2 lbs.	
Berries	2 lbs.	1 lb. 6 oz.

PREPARATION FOR CANNING IN GLASS.

Jars.—The glass-top jar with wire clamp is the best type of jar for use in intermittent processing. If products are to be sold, a good commercial jar is necessary. Commercial jars when purchased in gross quantities are cheaper than household jars and can be purchased in appropriate size for each product. A 10 or 12 ounce jar with glass top and screw rim can be satisfactorily used for preserves, jams, pickles, etc. Another good type of commercial jar is one with hermetic cap and can be had in different sizes for various products. A 4-ounce size is suitable for individual service, a 10-ounce size for general use.

Assemble all supplies and utensils such as jars, new rubbers and lids, wooden spoons, paddle, one-half pint measuring cup, measuring spoons, paring knives, sugar, salt, soda, etc., in a clean, convenient place in which to work.

STEPS TO BE TAKEN IN CANNING IN GLASS.

The steps 1, 2, and 3, under "Canning in Tin," are also to be followed when packing in glass. Sterilize jars by placing them in a vessel, side down, covering with cold water, bringing to a boil and boiling for 15 minutes.

4. Packing.—After selecting fruit or vegetables for uniformity in size and quality (see score) it should be arranged with reference to symmetry and the best use of the space within the jar. In placing the fruit or vegetable in a jar, a thin, slender, flexible paddle made of cane is useful. This paddle is also used to take out the bubbles of air by running it down the side of the jar to touch these bubbles after the liquor has been added to pack.

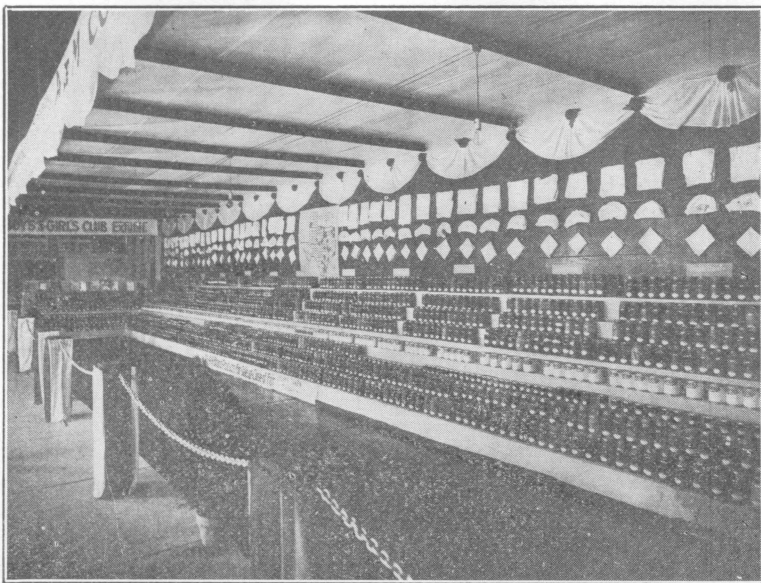
5. Adjusting the Cap.—Before placing the cap be sure that the rubber is flattened in its groove, without the presence of any seed or particle of the fruit: When a screw-top jar is used, screw the cap evenly about half way. When the glass-top jar with wire clamp is used, place the lid on evenly and raise both clamps up, fasten the upper one to hold the lid in place. With the hermetic jar, fasten the cap on the jar evenly with the clamp. This type of jar is self-sealing as it cools.

Processing.—Place the jars in a water bath on a rack or tray (a wooden one is good) to avoid breaking. Have the water the same temperature as the contents, letting it come to within two inches of the tops of jars. Have a tight cover for the vessel to keep in the steam. Do not count time until the water begins to boil; keep it boiling steadily for the time required. Seal the jars air-tight promptly at end of processing and remove them from the bath, being careful not to allow a cold draft to strike them. In intermittent processing, raise the clamp of each jar at the beginning of each processing to allow for

expansion. Seal at close of each processing. The hermetic jar is not a suitable one for intermittent processing.

7. Store products in a cool, dry, dark place.

8. **Labeling.**—Before labeling, wash and polish each jar. Place the label on the plain side of the jar midway between the seams one-fourth inch from the lower edge. On every label must appear the name of the contents, name and address of the packer, and net weight in pounds and ounces.



TEXAS CANNING CLUB EXHIBIT AT DALLAS STATE FAIR.

SCORE FOR JUDGING CANNED FRUITS AND VEGETABLES.

I. Appearance	25
(a) Color.	
(b) Clearness.	
II. Texture	10
III. Flavor	20
IV. Uniformity	15
(a) Ripeness.	
(b) Appropriate size.	
V. Pack (arrangement)	15
VI. Container	15
(a) Appropriate package.	
(b) Label.	
(c) Neatness.	
Total	100%

CANNING VEGETABLES (HOT WATER PROCESS).

Do not attempt to use this table without reading all directions carefully.

Vegetable	Blanch Minutes	Liquor	In Tin			In Glass	
			No. Can	Exhaust Minutes	Process	Jar	Process
Asparagus	3 to 4	Brine (heavy)	2	2	3 Intermittent or 2 hr.	Pint	Int. or 2 hr. con.
String beans	3 to 8	Brine	2	3	3 Intermittent	Pint	Int. or 2 hr. con.
String beans		do.	3	5	5 Intermittent	Quart	Intermittent
Lima beans	2 to 5	Salt, sugar, water	2	3	3 Intermittent	Quart	Intermittent
Beets	Cook $\frac{3}{4}$ done, peel	Brine	2	3	1 to 2 hours	Quart	1½ to 2 hours
Carrots	Cook $\frac{3}{4}$ done, scrape	do.	2	3	1 hour	Quart	1 hour
Corn	1 to 3 (blanch on cob)	Salt, sugar, water	2	10	Intermittent	Pint	Intermittent
Okra	10 to 15	Brine	2	3	Intermittent	Pint & Quart	Intermittent
Peas (very young)	1 to 3	Salt, sugar, water	2	3	45 min. first day, 35 sec., and 3rd days	Pint	Same as No. 2
Peas, medium	3 to 8	do.	2	3	Intermittent	Pint	Intermittent
Potato, sweet	Cook $\frac{3}{4}$ done, peel	Pack dry	3	15	3 hours	Quart	3 hours
Rhubarb		Cold water	2	2	15 minutes	Quart	15 minutes
Soup mixture		Salt, sugar	2	2	2 hr. or intermittent	Quart	2 hr. or Int.
Tomato		do	2	2	20 minutes	Pint	15 minutes
Tomato		do	3	3	30 minutes	Quart	30 minutes

Note.—String beans packed in No. 2 cans are preferable because more surely sterilized. Corn, lima beans and peas should never be packed in larger container than No. 2 and always processed intermittently. Corn is cut from cob after blanching. Soup mixture containing corn and lima beans should always be processed intermittently. The brine used is made of 2 1-2 oz. salt to 1 gallon of water, except for asparagus, which contains 4 ounces to 1 gallon. Beets and rhubarb when packed in tin must be put in enamel-lined cans.

Note.—Int., Intermittent. Con., Continuous.

CANNING FRUITS (HOT-WATER PROCESS).

Fruit	Blanch	Sirup	In Tin			In Glass	
			No. Can	Exhaust Minutes	Process Minutes	Jar	Process Minutes
Apples	1 minute	No. 1	3	2	8	Quart	12
Berries		No. 3	2	2	10	Quart	10
Cherries, sweet	15 seconds	No. 3	2	2	20	Quart	25
Cherries, sour	15 seconds	No. 4	2	2	20	Quart	25
Currants		No. 3	2	2	15	Quart	15
Figs	Soda Blanch	No. 3	2	2	25	Quart	30
Gooseberries		No. 3	2	2	15	Quart	20
Guava	15 seconds	No. 4	2	3	20	Quart	35
Guava	15 seconds	No. 4	3	3	25	Pint	25
May Haw		No. 3	2	2	20	Quart	25
Peaches	15 seconds	No. 4	3	3	15	Quart	20
Pears	15 seconds	No. 3	3	3	20	Quart	20
Plums	Prick with needle	No. 4	2	2	12	Quart	15

Note.—Berries, cherries, currants, figs, gooseberries, May haws, and plums when packed in tin must be put in enamel-lined cans. To make the sirups recommended, boil sugar and water together in the proportion given below until sugar is dissolved. Strain all impurities out of the sirup before using.

Sirup No. 1.—Use 14 ounces to 1 gallon water.

Sirup No. 2.—Use 1 pound 14 ounces to 1 gallon water.

Sirup No. 3.—Use 3 pounds 9 ounces to 1 gallon water.

Sirup No. 4.—Use 5 pounds 8 ounces to 1 gallon water.

Sirup No. 5.—Use 6 pounds 13 ounces to 1 gallon water.

The sirup for canned cherries is made of berry juice instead of water.

RECIPES

(Note.—All measurements are level. The special abbreviations used are tbsp. for tablespoonful, tsp. for teaspoon, and c. for cup.)

CANNED PEACHES.

Take firm ripe peaches, place in wire basket or square of cheese cloth, blanch by lowering for 15 seconds into water below boiling (about 180 degrees F.), plunge into cold water after blanching to make firm. Peel, stone, pack in jars, and cover with a sirup made by boiling together 1½ pounds sugar to 1 quart water. Process 15 minutes. Quart jars.

CANNED PEACHES—(Corn Syrup—Extra Fine).

Follow directions above, using the following sirup: 1¼ pounds of sugar, ¾ pounds of Crystal White Karo sirup, 1 pint of water. Heat until sugar is melted and pour over peaches. Process 15 minutes. Quart jars.

BLACKBERRIES OR DEWBERRIES.

Select large, firm, ripe berries. Wash by placing in colander or sieve. Wash three times by pouring water over the berries. Pack in jar, shaking jar gently to settle berries; pile high, and lay on lid of jar, place on false bottom in pan with 2 inches of water, heat slowly in oven for 20 minutes, leaving door open at first; slow fire.

Boil on stove sirup made from 1 cup of sugar to 5 of water. Pour

boiling hot over berries; place on rubber and seal at once.

The syrup may be made from juice of crushed berries instead of water.

CANNED BEANS

Select young, tender, round, stringless beans for log cabin pack. Blanch from 3 to 8 minutes, measure width of jar and cut beans to fit. Place solid layer in bottom of jar, place second layer in opposite direction, continue alternate layers until jar is full. Fill jar with brine, obtained from 5 level tablespoonfuls salt to a gallon of water. Use intermittent process or two hours.

PIMENTOS PEPPERS.

The fruits of the mild-flavored varieties of Spanish peppers (used as canned pimentos) differ from the ordinary sweet bell pepper in that they have a much thicker meat, very tough skin, and are smooth in contour, being comparatively free from ridges. These peppers, upon being heated, develop a juice which when mixed with water makes an unpleasant slimy mixture. For this reason no water is used in their preparation for salads or in canning.

Select sound, uniform peppers of medium size. To remove seeds, cut around the stem of each with a slender paring knife and remove the inside partitions. To peel, place the peppers in a hot oven from 6 to 10 minutes (until the skin blisters and cracks), being careful not to allow them to burn. Remove the skin with a slender paring knife. Flatten the peppers and pack in horizontal layers. No liquid is used. The Processing brings out of the peppers a thick liquor, which almost covers them in the jar. Process in quart jars in hot water at boiling temperature for 30 minutes.

CANNED OKRA.

Only young, tender okra should be packed. Dip in hot water until it wilts, then plunge in cold salted water; remove the cap, without cutting into the seed pod, and pack it whole. The pods should be uniform in size. Brine is added, which is made of 2½ ounces of salt to one gallon of water. Cook one hour each on 3 successive days (intermittent process).

SALAD TOMATOES.

Put into wire sieve or flour sack and lower into boiling water for one minute. Remove at once to prevent cooking. Plunge into cold water to make fruit firm, and peel promptly, using a slender pointed knife to remove core, and be careful not to cut into cells. Keep the tomato whole.

Put ½ teaspoonful salt in bottom of sterilized jar, pack tomatoes, put ½ teaspoonful salt on top of tomatoes. Fill jar until running over with boiling water. Seal, set in vessel, cover jar with boiling water and set aside to cool. In the warmer sections it will be necessary to let the vessel remain over fire for 10 minutes before setting aside. Tomatoes canned in this way may be served sliced or stuffed for salads.

TOMATO PUREE.

- | | |
|---------------------------------------|---------------|
| 1 gal. thick tomato pulp. | 1 tsp. salt. |
| 2 medium sized onions. | 2 tsp. sugar. |
| 4 tsp. chopped sweet red pepper pulp. | |

Tomato sauce or puree may be made from small or broken tomatoes. Cut the tomatoes into fourths and cook until the pieces become broken and soft. Press the pulp through a sieve, discarding only the seed and skins. Add the onion, pepper pulp and seasoning to the strained pulp and cook until it is of the consistency of catsup. It is necessary to stir frequently in order to keep this mixture from burning. Pack in No. 2 cans, jars or bottles. Exhaust for five minutes and process for 20 minutes.

TOMATO PASTE.

- | | |
|---------------------------------------|-----------------------------------|
| 1 qt. thick strained tomato pulp. | $\frac{1}{2}$ tsp. salt. |
| 1 slice onion (2 inches in diameter). | 1 tsp. paprica or 4 tbsp. chopped |
| 1 tbsp. mixed spices. | sweet red pepper pulp. |
| 1 tsp. sugar. | |

Tie spice in cheese cloth and cook with tomato pulp in a pan over boiling water for about three hours. The pulp should be cooked until much of the moisture is evaporated and the paste thick enough to hold the shape of spoon when tested by dipping out a spoonful of it.

Mix one tablespoon of spices about as follows:

- | | |
|--|---|
| $\frac{1}{4}$ tsp. mustard seed. | $\frac{1}{2}$ tsp. crushed celery seed. |
| $\frac{1}{2}$ tsp. cloves. | $\frac{1}{2}$ bay leaf. |
| $\frac{1}{2}$ tsp. cinnamon. | 1 sprig mace. |
| $\frac{1}{4}$ tsp. whole black pepper. | |

SOUP MIXTURE.

- | | |
|--|-----------------------------------|
| 1 pt. tomato pulp. | 1 cup blanched corn, or tiny lim, |
| 1 tsp. salt and sugar mixture. | beans. |
| | 1 cup okra. |
| 1 slice of onion (2 inches in diameter). | |

The tomatoes should be heated, rubbed through a sieve and cooked down to about the consistency of catsup before measuring; then the corn, okra, onion and seasoning should be added, and cooked until the corn and okra are about three-fourths done. Pack into cans or jars and follow directions for processing as given in the canning table.

STRAWBERRY PRESERVES—Recipe No. 1.

Make a syrup of 26 oz. sugar and 6 oz. of water, bring to a boil, and skim. Add 2 pounds washed, capped, and stemmed strawberries, boil until it reaches 222 degrees F., or until the syrup is very heavy, skim, pack in jars, pour the syrup over them, seal and sterilize by placing in water, bringing this to boil, and boiling for 15 minutes for pint containers and 25 minutes for quarts.

STRAWBERRY PRESERVES—Recipe No. 2.

To 2 pounds of washed, capped, and stemmed strawberries add 26 oz. sugar, let stand over night. In the morning pour juice thus ob-

tained into a preserving kettle, add berries and cook at 222 degrees F. until the syrup is very heavy. Skim, pack in jars, pour syrup over them, seal and sterilize by placing in water and bringing this to boil. Boil 15 minutes for pint containers and 25 minutes for quarts.

WATERMELON RIND PRESERVES.

Cut 1 pound rind into 1 inch squares, remove peel and all pink part. Soak over night in limewater (1 ounce lime to 2 quarts water), let the lime settle to bottom, pour off clear water (use clear water only). The following morning let stand for 2 hours in clear water. Drain well then drop into boiling water and boil rapidly for 10 minutes. Drain again and add gradually to the syrup (made by boiling together 3 cups sugar, 3 pints water). Add to this the juice of one half lemon and three extra slices of lemon. Cook until the melon is tender and transparent. Allow to stand until cold, arrange the pieces attractively in the jars, garnishing with slices of lemon. Cover with syrup testing 50 to 55 degrees. Process and seal.

TOMATO PRESERVES.

1 lb. tomatoes. ½ lb. sugar.

Scald tomatoes, peel and core, allow to stand in sugar over night. In morning cook until tomatoes are transparent or clear. Pack in jars. Boil syrup until very thick, pour over tomatoes and seal.

SWEET PICKLED PEACHES.

½ peck peaches. 1 pt. vinegar.
2 lbs. brown sugar. 1 oz. stick cinnamon.
Cloves.

Boil sugar, vinegar, and cinnamon 20 minutes. Dip peaches in hot water, then rub off the fur with towel. Stick each peach with four cloves. Put into syrup and cook until soft, using one-fourth peck peaches at a time.

PEACH MARMALADE.

2¼ lbs. peaches cut into small 1 inch ginger root.
pieces. ½ cup. peach juice.
1 lb. sugar. 1 tsp. cinnamon bark.
6 whole allspice. 1 tsp. sprig mace.
1 cracked peach seed.

Tie spices in cheesecloth bag.

Cook all together until thick and clear (to 220 degrees F); pack hot in sterilized jars and seal at once. If this is done quickly, having everything very hot, a good seal should result. However, when packing for market it is far safer to process, both to insure sterilization and a tight seal.

GRAPE MARMALADE.

Pick over, wash, drain and remove stems from grapes; separate pulp from skins. Put pulp in preserving kettle; heat to boiling point and cook slowly until seeds separate from pulp; then run through a hair sieve. Return to kettle with skins; after weighing add an equal measure of sugar and cook slowly 30 minutes, occasionally stirring to prevent burning. Seal as directed for peach marmalade.

PREPARATION OF ORANGE PECTIN.

Cut the yellow from the peel of 5 oranges, being sure to remove all oil cells, but as little of the white portion as possible. Then cut off the white portion of the peel from the pulp as if peeling apples. The white portion is passed through a food chopper. For each $\frac{1}{4}$ pound of the peel add $\frac{1}{4}$ pound of water. Add the juice from one-half of a lemon, mixed thoroughly, and allow to stand 4 or 5 hours. At the end of this time add $1\frac{1}{2}$ pounds of water, boil for 10 minutes and allow to stand over night. Next morning boil for 5 minutes, allow to cool, place in a flannel jelly bag, press to remove the juice, then drain juice through a clean flannel jelly bag to clarify. This may be placed while hot in sterilized jars, sealed, and kept for later use.

MINT AND ORANGE PECTIN JELLY

One pound of orange pectin juice, as prepared above, is poured in a kettle, heated to boiling, and one pound of sugar added. The boiling is continued until the jellying stage is reached, which is indicated by the flaking or sheeting from the spoon. At this point a small amount of green vegetable coloring matter is added, together with two drops of oil of peppermint. Stir thoroughly and pour while hot into clean sterilized jelly glasses. After a few moments the scum which rises to the top may be easily removed with a spoon. When the jelly is cold, pour hot paraffin over it and store away.

ORANGE MARMALADE—(Three-day Method).

1 grapefruit, 1 orange, 1 lemon.

The fruit is washed and then cut very thin through pulp and rind, discarding all the seed. Weigh the fruit and to each pound of the fruit add 3 pounds of water. Let stand over night. Next day boil for 30 minutes and let stand for 24 hours. Next day measure or weigh the fruit and for each pound or portion of fruit juice add 1 pound or portion of sugar. Bring to a boil and cook until it jells, stirring to keep from burning. This is placed in glasses or jars while still hot, allowed to cool and then covered with paraffin.

SWEET ORANGE OR GRAPEFRUIT MARMALADE

Wash the fruit, weigh the peel, and discard one-fourth of the peel, and note the weight of edible portion plus remaining peel. The peel is placed in water, boiled for 5 minutes and this water poured off, the peel is again covered with water and allowed to simmer over the

SOUR ORANGE MARMALADE.

1 lb. peeled sour oranges.	2 lbs. water.
	1 lb. sugar.

1 lb. peeled sour oranges. 2 lbs. water.
1 lb. sugar.

Preparation of the Juice: After the peel has been removed, weigh the fruit, cut into small pieces, place in a kettle, and for each pound of orange taken add 2 pounds of water, boil until it thoroughly disintegrates. Pour into a flannel jelly bag and press until no more juice can be obtained. This juice is again drained through a clean flannel jelly bag without pressing. Pour this juice into a kettle, add the peel, bring to boil, add 1½ pounds of sugar for each pound of fruit, continue the boiling until the jelly stage has been reached, which is indicated by the flaking or sheeting from the spoon.

The sour orange jelly is made by preparing the juice as directed in sour orange marmalade. No peel is used in the jelly. For each pound of fruit taken, 1 pound of sugar is added. This is boiled until it has reached the jelling point.

Peel small white onions, cover with brine, allowing 1½ cups of salt to 2 quarts boiling water, and let stand for 2 days. Drain and cover with more brine, let stand 2 days and drain again. Soak in clear cold water 2 hours, put in jars with 1 or 2 slices of red pepper. Fill jars to overflow with vinegar scalded with sugar and mustard seed, allowing one cup of sugar and 2 tablespoonfuls of mustard seed to one gallon of vinegar. Seal while hot.

Select beets 1½ inches in diameter. Cook until peel will slip off easily. Be careful not to cut the root off before cooking, and have at least two inches of top on until beets are cooked tender.

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SWEET PICKLED CARROTS.

Wash and scrape 6 or 8 medium sized carrots, boil in slightly salted water until they can be pierced with a fork, drain and dash cold water over them. Put 1 pint of pure cider vinegar in a stew pan, add 3 cups of sugar (1 brown and 2 white). Add one teaspoonful each of cloves, cinnamon, and allspice (in bag). Let the syrup boil, then put in as many sliced carrots as the syrup will take. Cover and cook slowly for 10 minutes, then boil syrup 20 minutes longer. Pack in jars, pour over syrup, and process 10 minutes. Seal.

GREEN TOMATO PICKLES.

1 gal. green tomatoes.	1 tbsp. whole black pepper.
½ doz. large onions.	1 tbsp. whole cloves.
3 cups brown sugar.	1 tbsp. whole allspice.
½ lemon.	1 tbsp. celery seed (crushed).
3 pods red pepper.	1 tbsp. mustard seed.
3 cups vinegar.	1 tbsp. ground mustard.

Slice the tomatoes and onions thin. Sprinkle over them ½ cup of salt and let stand over night in a crock or enameled vessel. Tie the pepper, cloves, allspice, and celery seed in a cheesecloth bag. Slice the lemon and chop 2 pepper pods very fine. Drain the tomato and onion well. Add all seasoning except 1 pepper pod to the vinegar. Then add the tomato and onion. Cook for ½ hour, stirring gently at intervals to prevent burning. Remove spice bag to prevent darkening product. Pack in 10-ounce jar and garnish with slender strips of red pepper, placing them vertically on the opposite sides of each jar. Process for 15 minutes.

CHILI SAUCE.

Select only ripe tomatoes, wash but do not peel, cut out green cores and bad places, quarter, measure, and place in open-top porcelain-lined or granite vessel over stove.

For each gallon of tomatoes add 1 level cup of finely-chopped onions, 2 level cups chopped green sweet pepper (leaving out seed). Boil until soft and tender, mash through colander, measure pulp and add to each gallon of pulp the following:

1 level tsp. ground cloves.	1½ level tsp. ginger.
2 level tsp. red pepper.	1½ level tsp. cinnamon.
1 level tbsp. ground allspice.	½ level tbsp. black pepper.
¾ pt. sugar.	6 tbsp. salt.

1 pt. vinegar.

Boil until quite thick—much thicker than catsup.

DIXIE RELISH.

1 qt. chopped cabbage.	4 tbsp. mustard seed.
1 pt. chopped white onion.	2 tbsp. celery seed (crushed).
1 pt. chopped sweet red pepper.	¾ cup. sugar.
1 pt. chopped sweet green pepper.	1 qt. vinegar.
5 tbsp. salt.	

Soak the pepper in brine (1 c. salt to 1 gal. water) for 24 hours. Freshen in clear cold water for 1 or 2 hours. Drain well. Remove seeds and coarse white sections. Chop separately, and measure the

chopped cabbage, peppers, and onions before mixing. Add spices, sugar, and vinegar. Let stand over night covered in a crock or enameled vessel. Pack in small sterilized jars.

The standard pack will be in a vase-shaped 10-ounce hermetic jar. When ready to pack drain the vinegar off the relish in order that the jar may be well packed. Pack the relish in the jars, pressing it carefully; then pour over it the vinegar which was drained off. Paddle the jar thoroughly, to get every bubble out and allow the vinegar to displace all air spaces. Garnish each jar with 2 quarter-inch pointed strips of red pepper 3 inches long. Place these strips vertically on opposite sides of the seams of the jar. Cap, clamp, and process for 10 minutes at boiling temperature.

B. S. CHUTNEY.

(A hot sweet to serve with curries, cold meats, sausage, and stews.)

Red Part.	Yellow Part.
2 lbs. sweet Spanish pepper.	2 lbs. small yellow fig tomatoe
1 lb. sugar.	1 lb. sugar.
1 pt. lemon juice.	4 oz. pounded ginger root.
2 oz. hot pepper.	

Preparation of the red part.—Peel the peppers according to the instructions given for canning. Chop sweet and hot peppers together, add sugar and lemon juice, and let stand in an enameled vessel or crock for 12 hours; then drain off the liquor and allow it to simmer for 10 minutes. Pour it over the peppers again and let stand for 24 hours. Simmer the liquor again on the second day. On the third day repeat, allowing the peppers to remain in the liquor while simmering.

Preparation of the yellow part.—Peel the tomatoes by dropping them for a minute into boiling water and then into cold water, being careful not to cook or break them. Place in a bowl, add sugar and pounded ginger, cover, and let stand for 12 hours. Drain and simmer the liquor for 10 minutes. Pour it over the tomatoes while hot and allow it to stand again over night. Repeat this on the second day, and on the third day when the sirup is simmering add the tomatoes carefully and continue the cooking for 10 minutes. The tomatoes should remain whole.

For a standard pack use a 10-ounce vase-shaped hermetic jar. In packing, place the heavier color, red, at the bottom in a 1-inch layer; then place a 1-inch layer of yellow. Continue in this manner until the jar is neatly filled. Strain the liquor and pour it over the contents. Paddle to remove air bubbles. Cap, clamp, and process for 10 minutes. This may be packed for home use in pint jars and processed for 15 minutes.

The small yellow fig tomato used in the chutney recipe is the variety which may be used for green-tomato pickle and whole ripe-tomato preserves.